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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,287	09/28/2000	Keiko Matsubara	40589/DBP/Y35	8798

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EXAMINER

YUAN, DAH WEI D

ART UNIT	PAPER NUMBER
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1745

16

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/672,287

Applicant(s)/

MATSUBARA ET AL.

Examiner

Dah-Wei D. Yuan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 and 13-15 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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**NEGATIVE ACTIVE MATERIAL FOR RECHARGEABLE LITHIUM BATTERY
ELECTRODE FOR RECHARGEABLE LITHIUM BATTERY, AND METHOD OF
PREPARING NEGATIVE ACTIVE MATERIAL FOR RECHARGEABLE LITHIUM
SECONDARY BATTERY**

Examiner: Yuan

S.N. 09/672,287

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April 1, 2003

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 7, 2003 has been entered. Claim 1 was amended.

2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action (Paper No. 5).

Claim Rejections - 35 USC § 102

3. Claims 1-4,7,8 are rejected under 35 U.S.C. 102(e) as being anticipated by Goda et al. (US 6,004,695).

Goda et al. teach a non-aqueous secondary battery comprising a positive electrode material, a negative electrode active material and a separator. The negative electrode material mainly comprises an amorphous oxide containing at least one functional element selected from the group consisting of Sn, Mn, Fe, Pb, and Ge. Examples of the Ge compounds, Fe compounds,

Mn compounds, and Pb compounds include acetates (a fatty acid metal salt). The amorphous composite oxides can be synthesized by a calcination method or a solution method. Calcination is carried out preferably at temperatures of 500° to 1500°C. The resulting compound has an average particle size of 0.1 to 60 μm . In addition to the amorphous oxide, the negative electrode material also comprises flake graphite, lithium acetate and binders. These compounds are then kneaded in water to form a slurry. The slurry is applied to a copper foil by extrusion coating method, dried, compressed with calendaring, and cut to prescribed width and length to prepare a negative electrode. Goda et al. do not specifically disclose nature of the resulting compound after kneading and calendaring operation. However, it is the position of the examiner that such properties are inherent, given that both Goda et al. and the present application utilize similar mixing procedures. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature *is necessarily present in that which is described in the reference*. Inherency is not established by probabilities or possibilities. In re Robertson, 49 USPQ2d 1949 (1999). See Abstract; Column 12, Lines 36-60; Column 13, Lines 1-4,33-36; Column 14, Lines 21-22; Example 8.

Moreover, it is noted that claim 1 is a product-by-process claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

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Since Goda's actual negative active materail is similar to that of the Applicant's, Applicant's process limitation "...compound that is derived from a fatty acid metal salt" is not given patentable weight in this claim.

Allowable Subject Matter

4. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 6 would be allowable because the closest prior art of record, Goda et al. and Yoneda et al., do not disclose or suggest the amorphous metal compound includes one or both of SnO_2 or SnO .

5. Claims 9-11,13-15 are allowed. Claims 9-11,13-15 are allowable because the closest prior arts of record, Goda et al. and Yoneda et al., do not disclose or suggest the use of a fatty acid metal salt in the preparation of a negative active material for a rechargeable lithium battery, in which the fatty acid metal salt includes one or more metals selected form the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, Zn and Cd.

Response to Arguments

6. Applicant's arguments filed on February 7, 2003 have been fully considered but they are not persuasive.

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Applicant's principle arguments are

(a) Claim 1 has been amended to recite that the amorphous metal compound is derived from a fatty acid metal salt;

(b) the product produced in accordance with the claimed invention is different from that produced as disclosed in Goda.

In response to Applicant's arguments, please consider the following comments.

(a) Goda et al. teach the use of various precursor materials, including iron acetate, to fabricate the negative electrode active material. Also, the amorphous metal compound obtained from a fatty acid metal salt would be similar to those obtained from various metal salts recited in Column 12, Line 61 to Column 13, Line 28 in Goda reference. Therefore, the process limitation is not given patentable weight in the claim.

(b) In the Declaration submitted on December 17, 2002, powder agglomerates are clearly evident in the sample prepared based on the teaching of Goda reference and the one prepared according to the instant specification. Similar powder morphology and particle size are observed in both Figures (b) and (c). The bright edges of the particles in Figure (c) are attributed to electron charging when the micrograph is taken at a high operating voltage of 15 kV. In contrast, Figure (b) is taken at an operating voltage of 5 kV.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (703) 308-0766. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Dah-Wei D. Yuan
April 1, 2003

A handwritten signature in black ink, appearing to read 'Dah-Wei D. Yuan', followed by a long horizontal flourish.